Religiosity and moral development among senior high school students in Cape Coast: The roles of sex and religious affiliation

Eric Mensah[1]
Martin Owusu[2]
James Seth Anati[3]
Sandra Arthur[4]
Maame Ama Brago[5]
Augustina Kpipien[6]
Edwin Dorm[7]

[1]eric.mensah5@ucc.edu.gh
[2]martin.owusu@ucc.edu.gh
[3]Sethanati@gmail.com
[4]Sandykay320@gmail.com
[5]Maameamabrago11@gmail.com
[6]Augustinakpien@gmail.com
[7]edwin.dorm001@stu.ucc.edu.gh

[1]https://orcid.org/0000-0003-2362-8493
[2]https://orcid.org/0000-0002-5777-1936
[3]https://orcid.org/0009-0004-9804-6628
[4]https://orcid.org/0009-0007-8599-0339
[5]https://orcid.org/0009-0005-3677-0837
[6]https://orcid.org/0009-0009-7859-5888
[7]https://orcid.org/0009-0003-3663-286X

[1,2,3,4,5,6,7] University of Cape Coast, Ghana

https://doi.org/10.51867/scimundi.6.2.50

ABSTRACT

The relationship between religiosity and moral development remains an important area of inquiry in religious education, particularly during adolescence when young people negotiate personal values, social expectations, and ethical decision-making. This study examined the relationship between religiosity and moral development among senior high school students in the Cape Coast Metropolis of Ghana, with particular attention to the roles of sex and religious affiliation. Guided by Kohlberg's Moral Development Theory, Bandura's Social Cognitive Theory, and Moral Foundations Theory, the study adopted a quantitative approach and a descriptive cross-sectional survey design. Data were collected from 370 senior high school students using a structured questionnaire comprising measures of religiosity and moral development. The instruments demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients of .846 for religiosity and .906 for moral development. Descriptive findings indicated high levels of both religiosity (M = 4.22) and moral development (M = 4.22). Pearson product-moment correlation revealed a statistically significant positive association between religiosity and moral development ($r = .644$, $p < .01$). Simple linear regression further indicated that religiosity significantly predicted moral development, explaining 41.4% of the variance in students' moral development ($R^2 = .414$, $F(1, 368) = 260.325$, $p < .001$; $\beta = .644$). When sex and religious affiliation were entered alongside religiosity, the model explained 41.8% of the variance in moral development ($R^2 = .418$, $F(3, 366) = 87.559$, $p < .001$), while religiosity remained a significant predictor ($\beta = .646$, $p < .001$). These findings indicate that students who reported higher levels of religiosity also tended to report higher levels of moral development. The findings underscore the relevance of religious beliefs and practices in understanding students' moral reasoning, moral responsibility, respect for others, and ethical decision-making. The study recommends strengthening inclusive religious and moral education that promotes reflective moral reasoning, empathy, respect for religious diversity, and responsible decision-making.

Keywords: Moral Development; Religiosity; Religious Affiliation; Religious and Moral Education, Sex; Students

I. INTRODUCTION

Religiosity has been both an intricate and intriguing topic in the field of research pressing arms of scholars. For at least two reasons, religiosity assumes a difficult topic to describe. The first being the ambiguous and imprecise nature of the English language. Informally, according to Cokrohadisumarto et al. (2024) citing Roget's Thesaurus (Lewis,

Licensed Under Creative Commons Attribution (CC BY-NC)

2021), religiosity is synonymous with concepts like orthodoxy, religiousness, faith, belief, piousness, devotion, and holiness. These synonyms represent what researchers studying religiosity would refer to as facets of religiosity. A secondary factor contributing to this intricacy is the widespread interest currently held in the notion of religiosity across multiple academic fields, each of which approaches religiosity from a unique perspective while consulting with the other (Ammerman, 2020; Bowie, 2021). For instance, although religious educators could concentrate on orthodoxy and belief as cited by Ward and King (2018), theologians would treat religiosity from the perspective of faith (Hart, 2020). While sociologists would define religiosity as church attendance, belief acceptance, doctrinal knowledge, and living the faith, psychologists would opt to focus on the aspects of devotion, holiness, and piousness (Hart, 2020). It is challenging to have a meaningful discussion about the various terminologies used in academic fields to refer to similar aspects of religiosity without first providing a clear description from the perspective of religious education and how that knowledge is applied to the lived experience. According to Bentzen (2021), the definition of religiosity in the context of religious education is the practice of a particular religion along with its tenets, rites, beliefs, and code of conduct.

According to Curren and Ryan (2020), moral development is the process by which people pick up and absorb moral principles and values, which shapes their capacity for moral reasoning and ethical decision-making. Understanding how people move through several stages of moral judgment has been made possible by theories of moral growth, such as Kohlberg's phases of moral reasoning (Wahidah & Maemonah, 2020). The moral upbringing of our children is a vital component of Ghanaian culture, weaving the moral tapestry that will influence their decisions, deeds, and interactions with the outside world. This moral upbringing becomes relevant at the adolescent stage. Adolescence is a transforming period where adolescent minds and hearts must negotiate the challenges of self-discovery, cultural expectations, and the search for moral guidance. We observe a troubling tendency as our senior high school adolescent students' move through this critical stage: a disconnect between the expectations for strong moral development and the reality that is playing out in our sight. However, in the midst of this gloom, there is a ray of hope: religion may be able to illuminate the way to moral strength. Moral growth is especially important for students since it affects their relationships, decision-making, and potential contributions to society (Chowdhury, 2018). To encourage moral behaviour, responsible citizenship, and a fair and compassionate society, moral growth must be fostered in pupils (Chowdhury, 2018). Students who uphold moral principles including honesty, respect, and social responsibility are more likely to make constructive contributions to their communities (Mulang & Putra, 2023).

The connection between religiosity and moral growth is one subject that has attracted a lot of interest. Since religious teachings and beliefs frequently emphasize moral ideals, virtues, and ethical principles that can influence people's moral development and behaviour, the potential relationship between religion and morality has been extensively studied (Horowski, 2020). Higher levels of religiosity have been linked to higher levels of moral thinking and ethical behaviour, according to research (Ward & King, 2018; Arli et al, 2021). However, there is a complicated relationship between religiosity and morality that can be influenced by some variables, including individual characteristics, religious affiliation, and how one interprets religious teachings (Villani et al, 2019). Furthermore, studies have looked into how gender and religious affiliation could operate as mediators in the connection between moral growth and religiosity. Research has indicated that there are gender disparities in moral reasoning and ethical behaviour, with women often displaying greater moral development levels (Ward & King, 2018; Arli et al, 2021). Additionally, the relationship between religiosity and moral growth may be influenced by the emphasis that various religious affiliations place on particular moral precepts or ethical frameworks (Alshehri et al, 2021; Ward & King, 2018).

However, according to Mathes (2021), citing Kohlberg (1981), religiosity and moral reasoning are inherently unrelated because they represent two different spheres of human concern: religious reasoning is predicated on revelations from religious authorities, whereas moral decision-making is based on rational arguments of justice and is influenced by cognitive development (e.g., education) and exposure to socio-moral experiences (e.g., role-taking opportunities). Religion's main purpose is to validate morals, while morality's main purpose is to settle conflicts between people. Put differently, moral reasoning offers moral guidelines, whereas religious reasoning validates the significance of moral assessment (Malle, 2021). Despite Kohlberg's contentions, several scholars have endeavored to establish a connection between the two ideas and have deduced that morality and religion are inextricably linked (Marek & Waluilik, 2021; Sulaiman, 2019; Zmigrod, et al, 2019). Other researchers, however (Zmigrod, et al, 2019), contend that cognitive processes like dogmatism most likely account for the apparent relationship between religiosity and morality.

This study aims to add to the body of knowledge and inform strategies for encouraging moral uprightness and ethical behaviour among students by examining the relationship between religiosity and moral development, analysing the association between these two constructs, and investigating the mediating roles of gender and religious affiliation.

1.1 Statement of the Problem

Growing concerns in Ghana are being raised about the moral growth of youth, especially senior high school students. Evidence-based indicators point to a discrepancy or issue between the actual state of moral development and expectations. Concerning patterns have been found in studies involving moral disengagement, unethical behaviour,

Licensed Under Creative Commons Attribution (CC BY-NC)

reduced empathy, disciplinary problems, academic dishonesty, and interpersonal conflicts in learning environments (Amoah et al., 2021; Saroglou, et al, 2020). This implies that, in these crucial adolescent years, there was insufficient support for strong moral growth. Poor moral development has serious repercussions that can include worsening social cohesiveness, a rise in criminality, and subpar academic achievement (Lamb, 2019). According to Chowdhury (2018), addressing these problems calls for focused initiatives including improving curricula to incorporate thorough moral and religious education and creating settings that encourage ethical discourse. Individual, social, and cultural factors seem to interact in a complex way to cause the observed moral values to fall. Empirical studies have established that religiosity can significantly influence moral reasoning and behavior (Marek & Waluilik, 2021; Sulaiman, 2019; Zmigrod, et al, 2019). Conroy and Emerson (2004) conducted a study to examine the connection between religiosity and moral development. The results showed that while religious affiliation has no significant correlation with moral development, religious commitment has a significant correlation. On the other hand, studies by Kohlberg (1981) looked at the idea that religion is not the source of an individual's humanity. Behaving morally and with sophistication does not require one to be religious. Despite this, little is known about the precise mechanisms by which religiosity influences the moral growth of senior high school students in Ghana, especially in the Cape Coast Metropolitan area as previous studies (Mensah et al, 2025; Mensah, 2018) did not focus on these variables together. These gaps inform the nature of the study's objectives: to directly scrutinize the connection between religiosity and moral development among Ghanaian students, analyse correlations while considering potential mediators, and investigate how gender and religious affiliation may mediate this relationship. Addressing these aims can illuminate the role of religiosity in cultivating moral growth and ethical behaviour while accounting for key demographic factors. The findings could guide educational policies, religious teachings, and interventions to promote robust pathways for moral development among Ghana's youth.

1.2 Research Objectives

i. Determine the effect of religiosity on moral development of senior high school students
ii. Establish the direct relationship between religiosity and the moral development of senior high school students
iii. Establish the influence of religiosity, sex and religious affiliation on the moral development of students

II. LITERATURE REVIEW

2.1 Theoretical Review

This study leans on three foundational theories; the moral development theory, social cognitive theory, and moral foundation theory.

2.1.1 Kohlberg's theory of moral development

According to Kohlberg's well-known theory of moral development, people build their moral reasoning and decision-making skills over time by moving through a succession of hierarchical stages (Kohlberg, 1984). The fundamental tenet of this theory is that moral formation is a positive process influenced by social interactions and cognitive processes. Pre-conventional, conventional, and post-conventional are the three primary stages of moral growth that Kohlberg described. Each stage is distinguished by particular patterns of moral reasoning and decision-making.. According to the idea, a person's exposure to difficult moral decisions, cognitive growth, and social experiences all have an impact on how they proceed through these stages. According to McKay and Whitehouse (2015), religion can be understood in the framework of this study as a major sociocultural component that moulds a person's moral values, beliefs, and ethical principles, perhaps influencing their moral reasoning and decision-making processes. Consequently, disparities in pupils' moral development may correlate with discrepancies in religiosity.

2.1.2 Social Cognitive Theory

Albert Bandura’s (2023) Social Cognitive Theory highlights the dynamic interaction between individual elements (cognitive processes, beliefs, and attitudes), environmental effects, and behaviour. This hypothesis called the triadic reciprocal causation model (Bandura, 2023), holds that human behaviour is the result of a continual reciprocal interplay among these three factors. Personal characteristics, like religion, have the power to mould a person's values, beliefs, and thought processes, all of which have an impact on behaviour and moral judgment. Concurrently, moral behaviour can be encouraged or discouraged by societal norms, cultural values, and religious role models, among other environmental influences, through processes of self-regulation and observational learning (Bandura, 2023). According to Bandura (2023), the theory suggests that people possess the ability to self-reflect, self-regulate, and self-efficaciously, which can operate as a mediator between the impact of external and internal influences on their actions. According to Social Cognitive Theory, religiosity as a personal belief system may interact with environmental factors in the context of this study to influence a person's moral development through self-regulation, observational learning, and the development of moral self-efficacy beliefs (Ozhiganova, 2018).

Licensed Under Creative Commons Attribution (CC BY-NC)

2.1.3 Moral Foundations Theory

According to Burgess (2021), the Moral Foundations Theory, which was formulated by Jonathan Haidt and associates, posits that moral evaluations and choices are grounded on an inherent set of moral underpinnings or instincts. It is believed that these moral precepts have developed as adaptive systems to encourage collaboration and cohesiveness within the community. Care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, and purity/degradation are the five main moral pillars identified by the theory (Ramezani, et al, 2022). The hypothesis states that moral thinking and decision-making processes may be shaped by the relative importance and priority that various people and cultural groups assign to these moral underpinnings. According to this view, moral foundations are inborn, developed psychological processes that shape moral decisions and actions. It also suggests that moral concerns and ethical frameworks alter depending on how much importance different people and cultures place on each moral tenet. Additionally, cultural and genetic factors, such as religious practices and beliefs, shape moral foundations (Burgess, 2021).

The priority and perception of moral principles can be greatly impacted by religiosity (Nilsson, et al, 2020). The emphasis placed on particular moral issues and ethical precepts by religious beliefs and teachings might influence the proportional weight given to various moral foundations. Certain religious traditions stress the care/harm basis, which emphasizes compassion and concern for the well-being of others, while others may place greater emphasis on the purity/degradation foundation, which promotes values of physical and spiritual cleanliness and purity. Certain religious perspectives, which emphasize deference to established hierarchies and authoritative figures, may strengthen the basis of authority/subversion (Mikani & Rasoolzadeh Tabatabei, 2021).

2.2 Empirical Review

2.2.1 Relationship between religiosity and the moral development of students

Religiosity is state of devotion to God or to religious practices. Moral development is the lifelong process through which individuals learn to distinguish right from wrong, develop a conscience, and form ethical, social, and cultural values that guide their behaviour. The relationships between moral development, religious attitude and religious orientation are an important discussion which has not been seen so many researches. Ahmadi et al. (2013) suggested that religiosity and morality are in a symbiosis relationship, and each of them could be revised and mentioned to each other to return from extreme terms. Burris (2002) proposed that religiosity is linked to morality. Per this viewpoint, ethical attitudes and behaviours are due to religion believes. Religiosity put a set of values (that much of it has been supported by norms) in societies. Walker et al. (2012) also showed that ethical reasoning has negative relationships with internal and external religion orientation. Religion and morality have been closely intertwined. This is true whether we go back within Greek philosophy or within Christianity and Judaism (Wolfson & Fackenheim, 1947) since, morality, religion and religiosity are one of the most important dimensions of each person's life, and moral development will affect the lives of every person. The morality, value behaviour, the optional attributes of humans and determine proper and improper system. Also, religion is a practical system based on beliefs that has been sent in the realm of personal and social dimensions of the Lord, to guide human in growth and perfection of the divine (Ward,1998). So, each person who improves in morality developments, obligation to religious duties will reduce. These results were in the same line as the Kohlberg study (1981) suggested that religious people show limited moral developments, since they lost the cognitive capacity for principal reasoning. Baumsteiger et al. (2013) studied 1,037 college students and found that religiosity was positively linked to moral idealism, while spirituality was negatively associated with moral relativism. However, both variables explained only a small amount of variation in moral reasoning, indicating they are weak predictors of moral development.

2.2.2 Relationship between Religiosity, Sex and Religious affiliation on Moral Development

The relationship between religiosity and moral development has attracted considerable attention in both psychology and education, particularly in understanding how young people form moral values. Religiosity is often linked with commitment to moral principles, yet this relationship is not always direct or consistent. This is because religiosity is usually expressed within a social and institutional context, most commonly through religious affiliation, which shapes how beliefs are interpreted and practiced. Religiosity is associated with certain moral orientations, especially those that emphasize absolute ethical standards. Individuals who report higher levels of religiosity tend to uphold moral idealism and show less support for moral relativism, indicating a stronger preference for fixed moral rules and principles (Baumsteiger et al., 2013). At the same time, the influence of religiosity on moral reasoning appears to be limited when considered on its own, suggesting that personal belief without a guiding structure may not fully explain variations in moral development (Baumsteiger et al., 2013). The role of social context becomes clearer when attention is given to adolescents and students. Moral development among young people is strongly influenced by their participation in religious communities, where values are not only taught but also reinforced through interaction and

Licensed Under Creative Commons Attribution (CC BY-NC)

shared practices. Adolescents who are actively engaged in religious groups often demonstrate higher levels of prosocial behaviour, including empathy and willingness to help others, largely because of the relationships and expectations within those communities (Saroglou et al., 2005).

In a similar vein, religiosity has been found to promote prosocial tendencies such as generosity and cooperation, particularly when it is practiced in environments that encourage moral action and reflection (Oviedo, 2016). However, the connection between religiosity and moral development is not always straightforward. Moral reasoning does not automatically improve simply because an individual adheres to religious teachings. In some cases, strict reliance on religious authority may limit independent moral judgement, especially when individuals follow rules without critical engagement (Skitka et al., 2009). This suggests that the quality and nature of religious experience matter, and that different forms of religious affiliation may encourage different approaches to moral reasoning. Religious affiliation, therefore, plays a central role in shaping how religiosity influences moral development. Affiliation determines the specific doctrines, moral teachings, and behavioural expectations that individuals are exposed to. It also provides a network of relationships that reinforces these values through social interaction. Adolescents who are strongly connected to religious institutions are more likely to display disciplined behaviour and avoid deviant activities, not simply because they are religious, but because they are embedded in communities that promote accountability and moral standards (Regnerus, 2003). In this way, religious affiliation serves as the mechanism through which religiosity is translated into actual moral behaviour.

Students express their religiosity through affiliation with specific religious traditions such as Christianity or Islam, and these affiliations shape their moral outlook in different ways. The teachings they receive, the expectations placed upon them, and the social environments they engage in all contribute to how their moral reasoning develops. As a result, students with similar levels of religiosity may differ in moral development depending on the nature of their religious affiliation and the kind of moral guidance it provides.

Gender playing crucial role between religiosity and moral development, particularly in adolescent populations. Discussions show that females tend to report higher levels of religiosity and are more likely to express care-based moral reasoning, while males are more inclined toward rule-based or justice-oriented reasoning (Bandaru, 2026). In addition, adolescent girls often demonstrate stronger connections between religious involvement and prosocial behaviour, suggesting that gender shapes how religiosity translates into moral outcomes (Furrow et al., 2004). When gender is considered together with religious affiliation, the relationship becomes more nuanced. Different religious traditions often reinforce gender roles and expectations, which in turn shape how males and females experience and express religiosity. For instance, participation patterns, moral teachings, and expectations of behaviour may differ for boys and girls within the same religious group, leading to variations in moral development outcomes (Bar-Yam et al., 1980).

III. METHODOLOGY

3.1 Research Design

The positivist paradigm was applied to give the study's target audience accurate and intelligible information. According to positivism, the variables in a phenomenon can only be fully described and comprehended by observation and measurement (Park et al., 2020). The study applied a quantitative research approach to quantify the associations between variables and generalize the results to a wider population. The descriptive cross-sectional survey research design of the quantitative approach was used for the study. This design allows for the collection of data across a large sample size within a specific time. In a cross-sectional survey, data are gathered at a single moment in time (Creswell, 2014). The study was to examine the effect of religiosity on the moral development of senior high school students in Cape coast.

3.2 Study Area

The study was conducted in the Cape Coast Metropolis in the Central Region of Ghana. Cape Coast Metropolis is widely recognised as an educational hub due to its concentration of well-established second-cycle institutions. The study focused on the 10 public senior high schools within the metropolis, which are registered under the Ministry of Education and administered by the Ghana Education Service (GES). These schools are Adisadel College, Mfantsipim School, Wesley Girls' High School, St. Augustine's College, Holy Child School, Ghana National College, Aggrey Memorial A.M.E. Zion Senior High School, University Practice Senior High School (UPSHS), Academy of Christ the King, and Cape Coast Technical Institute. The presence of these diverse public senior high schools makes the Cape Coast Metropolis an appropriate setting for examining the influence of religiosity on moral development of senior high school students.

3.3 Population and sampling

Licensed Under Creative Commons Attribution (CC BY-NC)

The study consisted of all senior high school students in the Cape coast Metropolis. Twenty-three thousand nine hundred and seventy-six (23,976) students were the study's target population. From the estimated population, the study used Vitter's (1985) random sampling technique based on Slovin's formula for determining a sample size to arrive at a sample size of 370 students. The random sampling technique was used because senior high school students were selected randomly to partake in the study. The sample size calculation is based on the formula: $\left(n = \frac{N}{1+Ne^2}\right)$, where: n = minimum sample size; N = Population, and e = margin of error. Using a margin of error of 5%, and a population of 23,976; the minimum sample size is thus given as $\left(\frac{23976}{1+23976(0.05^2)}\right) = 370$.

3.4. Data Collection Instrument and Procedures

The study employed the use of questionnaire for the collection of data. The questionnaire included items that measured students' moral development and religiosity levels in addition to several demographic questions. The questionnaire was in three sections The purpose of section A was to gather demographic information about the participants, such as age, gender, and religious affiliation. Section B had 17 items that measured students' level of moral development. These items were adopted from Skisland et al. (2012) scale for measuring moral development. Section C had 20 items that were adopted from Sârbu et al. (2021) to measure students' level of religiosity. Items in section B and C were measured on a five-point likert scale; 1 denotes undecided, 2 strongly disagrees, 3 disagree, 4 agree, and 5 strongly agree. Ethical considerations were paramount throughout the data collection process. Researchers adhered to ethical guidelines and standards, ensuring that the rights and well-being of participants are respected at all times. Additionally, measures were implemented to minimize potential biases and ensure the integrity of the data collected. These included avoiding leading or suggestive language in survey items, maintaining neutrality in the sharing of hard-copy questionnaires with participants, and adhering to established protocols for data handling and storage.

3.5 Validity and Reliability

The survey questionnaire was pilot-tested to find and fix any problem with the relevance, comprehensibility, and clarity of the survey items. Furthermore, routine oversight and monitoring of data-gathering operations is carried out to guarantee compliance with set guidelines and standards.

Table 1

Cronbach's Alpha for Reliability Test

Field	Number of Items	Cronbach Alpha
Religiosity (practices & beliefs)	20	0.846
Moral development	17	0.906
Total	**37**	**0.930**

Table 1 shows details of the Cronbach alpha reliability coefficients for the two main constructs (Religiosity and Moral development). The reliability test was done using SPSS Cronbach's alpha technique. Cronbach's alpha values varied from 0.822 to 0.906, which is a good and high range for the study. Cronbach alpha (CA) was used to evaluate the factors' validity and reliability; a cut-off of 0.7 is required. Overall, the questionnaire had a Cronbach's alpha of 0.930, which indicates that the questionnaire is reliable because it scored more than 0.7 and was closer to 1.

3.6 Quantitative Treatment to Data

Data editing, cleansing, and classification were among the data processing activities performed. Editing and cleaning data involves looking over the information gathered to find any mistakes or omissions and fixing them as soon as possible. Conversely, data classification involves organizing the gathered information into groups or classes based on shared attributes. The Statistical Package for Social Science (SPSS), version 25. The survey responses will be cleaned up using Microsoft Excel 2019. Data analysis involves descriptive and inferential statistical techniques. Descriptive statistics (frequencies, percentages, means, standard deviations) and inferential statistics (correlation, simple and multiple regression) were employed to analyse the data.

3.7 Ethical Consideration

Ethical considerations were central to the conduct of this study, with comprehensive measures implemented to safeguard participants' rights, dignity, privacy, and autonomy. Ethical approval was obtained from the Institutional Review Board of the University of Cape Coast, alongside the requisite approval from the Department of Arts Education. Participants were assured of the confidentiality and anonymity of the information they provided, and the research team emphasised that participation was entirely voluntary. They were also informed of their right to withdraw from the study

Licensed Under Creative Commons Attribution (CC BY-NC)

at any stage without penalty or adverse consequences. Informed consent procedures were undertaken, with verbal consent initially facilitated to promote effective communication, followed by the subsequent acquisition of written informed consent. Participants were further assured that the data collected would be used exclusively for academic and research purposes. These ethical safeguards were designed to foster an environment of trust and openness, encourage candid responses, and uphold the integrity of the research process. Adherence to these protocols strengthened the ethical rigour of the study while supporting the credibility and quality of the data collected.

IV. FINDINGS & DISCUSSION

4.1 Demographic information

The section of the results details the demographic characteristics of the respondents who participated in the study. Details are shown in Table 2.

Table 2

Demographic Characteristics of the Participants

Demographics	Category	Frequency	Percentage
Gender	Male	99	26.8
	Female	271	73.2
	Total	370	100
Religious Affiliation	Islam	62	16.8
	Christianity	293	79.2
	Traditional Religion	12	3.2
	Buddhism	3	0.8
	Total	**370**	**100**

With respect to gender**,** the results indicate that 99 respondents (26.8%) were male, whereas 271 respondents (73.2%) were female. This shows that females constituted nearly three-quarters of the sample, while males accounted for slightly more than one-quarter. The substantial difference in gender representation suggests that the sample was predominantly female. This imbalance should be considered when interpreting findings involving gender, particularly where comparisons between male and female respondents are made. Nevertheless, the relatively large number of female respondents provides adequate representation of female perspectives within the study.

Regarding religious affiliation, the findings indicate that Christianity was the dominant religious affiliation**,** with 293 respondents (79.2%) identifying as Christians. This was followed by Islam**,** represented by 62 respondents (16.8%). A smaller proportion of respondents, 12 (3.2%)**,** identified with Traditional Religion, while only 3 respondents (0.8%) reported Buddhism as their religious affiliation. Thus, although the sample included respondents from different religious backgrounds, it was overwhelmingly Christian, with Christians constituting approximately four out of every five respondents.

The distribution of religious affiliation suggests that the study captured some degree of religious diversity, particularly through the inclusion of Christian, Muslim, Traditional Religion, and Buddhist respondents. However, the very small number of respondents affiliated with Buddhism and Traditional Religion means that findings concerning these groups should be interpreted cautiously. The dominance of Christianity may also reflect the religious composition of the population from which the respondents were drawn.

4.2 Descriptive statistics

This section presents the descriptive results and discussion on the two main construct; religiosity and moral development. These results are detailed in Tables 3 and 4. Table 3 shows results on students' level of religiosity. Religiosity was measured in two dimensions; religious practices and religious beliefs

Table 3

Level of Religiosity

Religiosity Statement	Mean	SD
Religious Activities (Practices):		
I observe the Holy days in my religion	4.33	0.916
I observe Inter-sex socializing rules of my religion	4.03	1.122
I observe the Dietary laws of my religion at home	4.01	1.098
I observe the Dietary laws of my religion out of home	3.86	1.205
I observe all sacred days of mourning	3.77	1.268

Licensed Under Creative Commons Attribution (CC BY-NC)

I do observe fast days in my religion	4.23	1.011
I pray always before meals	4.39	0.858
I always pray to end Holy days in my religion	4.03	1.155
I observe all sacred festivals of my religion	4.30	1.048
I give offering and tithes	4.35	0.935
Religious Principles (Beliefs):		
I believe in religious miracles	4.48	0.830
I believe in the authority my religious leaders	4.51	0.759
I believe in reward and punishment for actions in my religion	4.59	0.724
I believe God supervises each individual	4.68	0.665
I believe in the Resurrection of the dead	4.45	0.942
I believe a divine being created the world and all beings	4.62	0.738
I believe in the Oral laws of my religion	4.29	0.981
I believe in the era of the Messiah	4.41	0.927
I believe there is a Divine law	4.32	1.023
I believe in Prophecy and prophets	4.30	1.027

The results in Table 3 indicate that respondents demonstrated a high level of religiosity in terms of religious activities and practices**,** with mean scores ranging from 3.77 to 4.39. The highest-rated practice was praying before meals (M = 4.39, SD = 0.858), followed by giving offerings and tithes (M = 4.35, SD = 0.935), observing holy days (M = 4.33, SD = 0.916), and observing sacred festivals (M = 4.30, SD = 1.048). Respondents also reported high levels of fasting, adherence to dietary laws, and observance of religious socialising rules. The lowest-rated practice was observing sacred days of mourning (M = 3.77, SD = 1.268), although this still reflects a relatively high level of observance. Overall, the results suggest that respondents actively expressed their religiosity through prayer, religious observances, financial giving, fasting, and adherence to religious behavioural requirements.

The results further show very strong endorsement of religious principles and beliefs, with mean scores ranging from 4.29 to 4.68. The highest-rated belief was "I believe God supervises each individual" (M = 4.68, SD = 0.665)**,** followed by belief in divine creation (M = 4.62, SD = 0.738) and reward and punishment for actions (M = 4.59, SD = 0.724). High levels of agreement were also recorded for belief in the authority of religious leaders, miracles, resurrection, the Messiah, divine law, prophecy, and prophets. Comparatively, the means for religious beliefs were generally higher than those for religious practices, suggesting that respondents demonstrated particularly strong internal acceptance of religious doctrines and principles, alongside substantial participation in religious practices. Overall, the findings indicate that religiosity among the respondents is characterised by both strong religious convictions and active religious observance. Overall, the results indicate that students' religiosity was high (M=4.22). This suggests that the students generally demonstrated strong commitment to both religious practices and religious beliefs. Table 4 shows results on students' level of moral development.

Table 4

Level of Moral Development

Statements	**Mean**	**Std. Deviation**
I am morally matured	4.25	0.909
I am able to make autonomous moral decision	4.09	1.064
I have a sense of humour	4.37	0.920
My moral character is well shaped	4.21	0.976
I am able to form my own moral principles	4.10	1.065
I have a sense of moral judgment	4.19	1.062
I think in a morally accepted manner	4.29	0.917
I am sensitive to the feelings of other people	4.35	0.880
I think of the consequences of my actions towards others	4.43	0.827
I think about the consequences of my own actions	4.44	0.835
Moral issues are my priority	4.17	0.956
I always learn moral issues in life	4.29	0.885
Social media use helps predict the outcome of my actions	3.84	1.166
I take into consideration the interest of others when it comes to moral issues	4.15	1.035
I can control my temper on provoking issues	4.26	0.917
I share moral issues with my friends	4.14	1.032
I respect the morals and values of other religions	4.49	0.811

The results in Table 4 indicate that the students demonstrated a high level of moral development across all the measured dimensions. Using the specified interpretation of 1.0–2.3 = low, 2.4–3.5 = moderate, and 3.6–5.0 = high, all

Licensed Under Creative Commons Attribution (CC BY-NC)

17 items recorded mean scores within the high category, ranging from 3.84 to 4.49. The highest mean was recorded for "I respect the morals and values of other religions" (M = 4.49, SD = 0.811), followed by "I think about the consequences of my own actions" (M = 4.44, SD = 0.835) and "I think of the consequences of my actions towards others" (M = 4.43, SD = 0.827). These findings suggest that the students have considerable awareness of moral responsibility, particularly with regard to respecting others, reflecting on the consequences of their behaviour, and appreciating moral values. High scores were also recorded for sensitivity to others' feelings (M = 4.35), having a sense of humour (M = 4.37), and thinking in a morally acceptable manner (M = 4.29).

The findings further show that students perceived themselves as capable of making independent moral decisions and developing appropriate moral principles, as reflected in autonomous moral decision-making (M = 4.09, SD = 1.064) and forming their own moral principles (M = 4.10, SD = 1.065). The lowest mean was recorded for "Social media use helps predict the outcome of my actions" (M = 3.84, SD = 1.166); nevertheless, this score remains within the high category. Based on the mean scores across the 17 items, the overall mean is approximately 4.22, which falls within the 3.6–5.0 high-level category. Therefore, the results indicate that students' moral development was high (overall M=4.22)**,** suggesting strong perceived moral maturity, moral judgment, consideration of others, self-regulation, and respect for diverse religious values.

4.2.1 Effect of Religiosity on Moral Development of Students

The study analysed the effect of religiosity on the moral development of students. Linear regression between religiosity and moral development was done to address the study's objective. The regression equation is written as follows;

$$\textbf{Eqn 1}: \mathbf{MD = a + \beta RL + \varepsilon}$$

Where;
MD = Moral Development (Dependent variable)
RL = Religiosity (Independent)
ε = Error term

Tables 5, 6, and 7 display the linear regression results between the RL (independent variables) and MD (dependent variable). The summary of the model's findings is presented in Table 5. The R-Square, R, Adjusted R Square, and Durbin-Watson Coefficient are presented in Table 5.

Table 5
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	0.644	0.414	0.413	0.46494	1.850

a. Predictors: (Constant), Religiosity
b. Dependent Variable: Moral Development

The R^2 (coefficient of determination) is the segment of variance in the dependent (Moral Development) variable explained by the regression model, as shown in Table 3. An R^2 value of 0.414 indicates that the specific criteria explain about 41.4% of the variations in the dependent variable (Moral Development) is explained by the independent variable (Religiosity). Other factors not addressed in this study could account for the remaining 58.6% variation in the independent variables.

The R-value is a representation of the Pearson product-moment correlation coefficient. The correlation between Moral Development and Religiosity is strongly positive, as shown by the R-value of 0.814. To evaluate correlation coefficient magnitude, Cohen (1988) suggests using the following ranges: r = 0.10 to 0.29 or r = -0.10 to -0.29 small, r = 0.30 to 0.49 or r = -0.30 to -0.49 medium and r = 0.50 to 1.0 or r = -0.50 to -1.0 high. As a result, the findings show that the two dimensions of Moral Development and Religiosity are strongly positively correlated. Table 3 also shows a Durbin-Watson coefficient of 1.850. The Durbin-Watson test helps measure the autocorrelation within the models. The range of the Durbin-Watson statistic is 0 to 4. The range of 1.50 to 2.50 is suitable. Durbin-Watson is low (less than 2.5), suggesting positive autocorrelation when consecutive error differences are minimal.

Table 6
Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	56.274	1	56.274	260.325	0.000
	Residual	79.550	368	0.216		
	Total	135.824	369			

Licensed Under Creative Commons Attribution (CC BY-NC)

a. Dependent Variable: Moral Development
b. Predictors: (Constant), Religiosity

The Analysis of Variance (ANOVA) is a statistical test developed by Ronald Fisher. If there is a statistical difference between the variables, the test indicates it. ANOVA findings from Table 6 show a statistically significant value of p= 0.000. For social scientific research, p-values that are ≤ 0.05 are considered significant, whereas p-values that are > .05 are not significant (Scheffe, 1999). The independent variable performs a great job of explaining the variation in the dependent variable if this criterion is satisfied. The value in this study is much lower than 0.05 (p =.000). The p-value determines the probability of receiving the observed results on the supposition that religiosity significantly influences moral development. With a plunging p-value, the detected difference becomes statistically more significant. (Andrade, 2019). Therefore, it can be concluded that the R and R^2 between the two dimensions of Moral Development and Religiosity are significant.

Table 7 offers information pertinent to understanding the regression equation. It reports the value of the regression intercept, the standardized and unstandardized coefficients, and the sig value. The intercept (a) value in the regression equation is the numerical value for the first row, labelled (constant), in the column marked unstandardized coefficient and sub-column B.

Table 7
Co-efficient Estimates

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.116	0.195		5.722	0.000
	Religiosity	0.727	0.045	0.644	16.135	0.000

a. Dependent Variable: MD

The independent variable (Religiosity) significant value, p=0.000, is less than 0.05. According to Fay and Gerow (2019), a significant value of less than 0.05 denotes that the independent variable considerably affects the dependent variable. Therefore, it may be said that Religiosity significantly affects the Moral Development of students. Additionally, Table 7 displays Religiosity's Beta value of 0.727, which according to Lehmann (2011), denotes a high positive effect of the independent variable on the dependent. The estimated regression equation can now be written as follows;

$$\text{Eqn 2: } MD = 1.116 + 0.727RE$$

Tables 5, 6, and 7 show metrics that depict that religiosity significantly influences moral development and these two variables are correlated. These findings are consistent with previous research undertaken in this subject area. In research conducted by Skitka et al., 2009 they found that religiosity significantly affects the moral competence and attitudes of students. In addition, a study by Oviedo, 2016 on moral competence, moral views, and religion shows that while the Literal vs. Symbolic dimension significantly correlates with moral attitudes and moral competence, the Exclusion vs. Inclusion of the Transcendence dimension does not.

4.2.2 Correlation between Religiosity and Moral Development

This section of the study analysed the magnitude and direction between moral development and religiosity. This metric shows whether there is a positive or negative relationship between the variables under study. Table 8 shows the results of the metric.

Table 8
Correlation Matrix

		Religiosity	Moral Development
Religiosity	Pearson Correlation	1	0.644**
Moral Development	Pearson Correlation	0.644**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The study examines the relationship between religiosity and moral development using Pearson's correlation coefficient. The results reveal a strong positive correlation between these two variables, with a correlation coefficient of 0.644. This correlation is statistically significant, as indicated by the double asterisks (**). The strength of this correlation (0.644) suggests a substantial association between religiosity and moral development. In the context of correlation coefficients, which range from -1 to +1, a value of 0.644 indicates a moderately strong to strong positive

Licensed Under Creative Commons Attribution (CC BY-NC)

relationship. This means that as religiosity increases, there tends to be a corresponding increase in moral development, and vice versa.

The positive nature of the correlation implies that individuals who score higher on measures of religiosity are likely to also score higher on measures of moral development. Conversely, those with lower religiosity scores tend to have lower moral development scores. However, it's crucial to note that correlation does not imply causation. While there is a clear association between these two variables, this analysis alone cannot determine whether religiosity causes higher moral development, whether moral development leads to increased religiosity, or if there are other factors influencing both variables. This finding could have implications for understanding the interplay between religious beliefs and ethical reasoning. It may suggest that religious teachings or practices contribute to the development of moral frameworks, or that individuals with more developed moral reasoning are more likely to engage with religious ideas. Alternatively, there might be underlying factors that influence both religiosity and moral development simultaneously

4.2.3 Influence of Religiosity, Sex and Religious Affiliation on the Moral Development

The study analysed the effect of religiosity, sex and religious affiliation on the moral development of students. Multiple linear regression analysis was done to address the study's objective. The regression equation is written as follows;

$$\text{Eqn 1: } MD = a + \beta S + \beta RA + \beta RL\ \varepsilon$$

Where;
MD = Moral Development (Dependent variable)
S = Sex (Independent variable)
RA = Religious Affiliation (Independent Variable)
RL = Religiosity (Independent variable)
ε = Error term

Tables 9, 10, and 11 display the multiple linear regression results between the RL, S and RA (independent variables) and MD (dependent variable). The summary of the model's findings is presented in Table 9. The R-Square, R, Adjusted R Square, and Durbin-Watson Coefficient are presented in Table 9.

Table 9
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	0.646	0.418	0.413	0.46481	1.868

a. Predictors: (Constant), Religiosity, Sex, Religious Affiliation
b. Dependent Variable: Moral Development

The R^2 (coefficient of determination) is the segment of variance in the dependent (moral development) variable explained by the regression model, as shown in Table 9. An R^2 value of 0.418 indicates that the specific criteria explain about 41.8% of the variations in the dependent variable (Moral Development) is explained by the independent variables (Religiosity, Sex and Religious affiliation). Other factors not addressed in this study could account for the remaining 58.2% variation in the moral development.

The R-value is a representation of the Pearson product-moment correlation coefficient. The correlation between Moral Development, Religiosity, sex and religious affiliation is strongly positive, as shown by the R-value of 0.646. To evaluate correlation coefficient magnitude, Rankin and Stokes (1998) 0.49 or r = -0.30 to -0.49 medium, and r = 0.50 to 1.0 or r = -0.50 to -1.0 high. As a result, the findings show that Moral Development, Religiosity, Sex and Moral development of students are strongly positively correlated. Table 9 also shows a Durbin-Watson coefficient of 1.868. The Durbin-Watson test helps measure the autocorrelation within the models. The range of the Durbin-Watson statistic is 0 to 4. The range of 1.50 to 2.50 is suitable. Durbin-Watson is low (less than 2.5), suggesting positive autocorrelation when consecutive error differences are minimal.

Table 10
Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	56.751	3	18.917	87.559	0.000b
	Residual	79.073	366	.216		
	Total	135.824	369			

Licensed Under Creative Commons Attribution (CC BY-NC)

a. Dependent Variable: Moral Development
b. Predictors: (Constant), Religiosity, Sex, Religious Affiliation

The Analysis of Variance (ANOVA) is a statistical test developed by Ronald Fisher. If there is a statistical difference between the variables, the test indicates it. ANOVA findings from Table 10 show a statistically significant value of p= 0.000. For social scientific research, p-values that are ≤ 0.05 are considered significant, whereas p-values that are > .05 are not significant (Amrhein et al., 2017). The independent variables perform a great job of explaining the variation in the dependent variable if this criterion is satisfied. The value in this study is much lower than 0.05 (p =.000). The p-value determines the probability of receiving the observed results on the supposition that religiosity significantly influences moral development through the mediating variables sex and religious affiliation. With a plunging p-value, the detected difference becomes statistically more significant. (Andrade, 2019). Therefore, it can be concluded that the R and R2 between Moral Development, Religiosity, Sex and Religious affiliation are significant.

Table 11 offers information pertinent to understanding the regression equation. It reports the value of the regression intercept, the standardized and unstandardized coefficients, and the sig value. The intercept (a) value in the regression equation is the numerical value for the first row, labelled (constant), in the column marked unstandardized coefficient and sub-column B.

Table 11
Co-efficient Estimates

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	0.936	0.248		3.768	0.000
	S	0.078	0.022	0.057	3.545	0.000
	RA	0.017	0.008	0.014	2.125	0.000
	RL	0.729	0.046	0.646	15.970	0.000

a. Dependent Variable: MD

The independent variables (Religiosity, Sex and Religious affiliation) significant value, p=0.000, is less than 0.05. According to Leigh (1988), a significant value of less than 0.05 denotes that the independent variables considerably influence the dependent variable. Therefore, it may be said that Religiosity, Sex and Religious affiliation significantly affect the Moral Development of students. Additionally, Table 11 displays Religiosity's Beta value of 0.729, Sex is 0.078, and religious affiliation is 0.017. Religiosity has a high positive effect on the dependent, whiles Sex and Religious affiliation have a low positive effect on the dependent (Andrade, 2019). The estimated regression equation can now be written as follows;

$$\text{Eqn 2: MD} = 0.936 + 0.078\text{S} + 0.017\text{RA} + 0.729\text{RE}$$

From Tables 9, 10, and 11, it was evident that the religiosity, sex and religious affiliation of the students predict moral development of students. These findings are the same as those of other studies. In a study by Bandaru (2026) on religion and risk, they found that women practice religion at a higher rate than men. These findings are also consistent with studies conducted by Ward and King (2018) and Arli et al, 2021 that explain student's religiosity. About the religious affiliation of students on their moral development, Pascarella and Terenzini (1991), Wimalasiri, et al (1996), and Furrow et al., 2004) for instance, all discovered a strong correlation between students' moral growth and their religious affiliation.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

Based on the findings, it can be concluded that religion constitutes an important dimension of the students' lives. Students not only expressed strong internal convictions about God, divine creation, moral accountability, religious authority, and other religious doctrines, but also translated these convictions into observable practices such as prayer, fasting, giving offerings and tithes, observing holy days and festivals, and adhering to religious behavioural requirements. Also, students generally possess strong moral awareness, consider the consequences of their actions, demonstrate sensitivity towards others, respect the moral values of different religions, and perceive themselves as capable of making autonomous moral decisions. This suggests that moral development is an important characteristic of

Licensed Under Creative Commons Attribution (CC BY-NC)

the students and may contribute to responsible interpersonal relationships and peaceful coexistence within Ghana's religiously and culturally diverse SHS environment.

Further, the study concludes that students with higher levels of religiosity tended to report higher levels of moral development. In the context of Ghanaian Senior High Schools, the finding highlights the potential relevance of students' religious beliefs and practices to their moral reasoning, responsible decision-making, respect for others, and development of positive moral values. However, since 58.6% of the variance remains unexplained, other personal, family, school, peer, and social factors may also contribute to students' moral development.

Furthermore, it can be surmised that students who reported higher levels of religiosity also tended to demonstrate higher levels of moral development. The finding suggests that religious beliefs and practices may be an important correlate of students' moral reasoning, sense of responsibility, respect for others, and ethical decision-making. However, the correlational nature of the finding means that it should be interpreted as an association rather than evidence that religiosity causes moral development. In the Ghanaian SHS context, the result underscores the relevance of religious and moral values in understanding students' moral development within a culturally and religiously diverse educational environment.

Finally, it can be concluded that students' moral development is associated not only with their level of religiosity but also with demographic and religious-background characteristics. In the context of Ghanaian Senior High Schools, the results highlight the importance of considering students' diverse religious backgrounds and social characteristics when examining moral development. However, the findings should be interpreted as associations rather than evidence of causal effects, particularly because the tables presented do not report the indirect effects or bootstrapped confidence intervals normally required to establish mediation.

5.2 Recommendations

Based on the findings and conclusions, it is recommended that Senior High Schools in Ghana should integrate students' strong religious convictions into inclusive values and moral education programmes, using prayer, religious beliefs, and moral principles as entry points for developing virtues such as integrity, empathy, respect, tolerance, responsibility, and peaceful coexistence. This should be done in a religiously inclusive manner that respects the diversity of faith traditions represented in Ghanaian schools. The schools should also strengthen school-based moral education programmes that promote reflective decision-making, respect for diverse religious and cultural values, and responsible behaviour**,** while giving particular attention to helping students apply these moral principles to contemporary challenges such as social media use and its potential consequences.

Again, it is recommended that Senior High Schools in Ghana should strengthen inclusive religious and moral education programmes that help students translate their religious beliefs and practices into responsible moral behaviours, particularly through activities that promote ethical decision-making, respect for others, empathy, accountability, and peaceful coexistence across religious and cultural differences.

It is further recommended that Senior High Schools in Ghana should provide inclusive religious and moral education activities that create opportunities for students to reflect on how their religious beliefs and practices relate to everyday moral decisions, respect for others, responsibility, empathy, and peaceful coexistence, while ensuring that such activities respect the diversity of religious beliefs represented in the school community

Finally, Senior High Schools in Ghana should strengthen inclusive religious and moral education programmes that recognise students' diverse religious affiliations and social backgrounds while using their religious values as a basis for developing moral reasoning, responsible decision-making, respect, empathy, and peaceful coexistence. Such programmes should avoid assuming that students from a particular sex or religious affiliation possess inherently higher or lower moral development and should provide equitable opportunities for all students to develop positive moral values

Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

REFERENCES

Ahmadi, V., Davoudi, I., Mardani, M., Ghazaei, M., & ZareZadegan, B. (2013). The relationships among moral development, religiosity and religious orientation in students. *Procedia - Social and Behavioral Sciences, 84*, 674–678.

Licensed Under Creative Commons Attribution (CC BY-NC)

Alshehri, F., Fotaki, M., & Kauser, S. (2021). The effects of spirituality and religiosity on the ethical judgment in organizations. *Journal of Business Ethics, 174*(3), 567–593.

Ammerman, N. T. (2020). Rethinking religion: Toward a practice approach. *American Journal of Sociology, 126*(1), 6–51.

Amoah, J., Said, S., Rampal, L., Manaf, R., Ibrahim, N., Owusu-Agyei, S., & Poku Asante, K. (2021). Effects of a school-based intervention to reduce cardiovascular disease risk factors among secondary school students: A cluster-randomized, controlled trial. *PLOS ONE, 16*(11), e0259581.

Amrhein, V., Korner-Nievergelt, F., & Roth, T. (2017). The earth is flat (p > 0.05): Significance thresholds and the crisis of unreplicable research. *PeerJ, 5*, e3544. https://doi.org/10.7717/peerj.3544

Andrade, C. (2019). The P value and statistical significance: Misunderstandings, explanations, challenges, and alternatives. *Indian Journal of Psychological Medicine, 41*(3), 210–215.

Arli, D., Septianto, F., & Chowdhury, R. M. (2021). Religious but not ethical: The effects of extrinsic religiosity, ethnocentrism and self-righteousness on consumers' ethical judgments. *Journal of Business Ethics, 171*(2), 295–316.

Bandaru, Y. S. (2026). *Protective pathways through moral reasoning: How parent engagement promotes positive outcomes among justice-involved youth* [Doctoral dissertation, Saint Louis University].

Bandura, A. (2023). *Social cognitive theory: An agentic perspective on human nature*. John Wiley & Sons.

Bar-Yam, M., Kohlberg, L., & Naame, A. (1980). Moral reasoning of students in different cultural, social, and educational settings. *American Journal of Education, 88*(3), 345–362.

Baumsteiger, R., Chenneville, T., & McGuire, J. F. (2013). The roles of religiosity and spirituality in moral reasoning. *Ethics & Behavior, 23*(4), 266–277.

Bentzen, J. S. (2021). Religiosity and development. In A. Banerjee (Ed.), *Oxford research encyclopedia of economics and finance*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190625979.013.688

Bowie, F. (2021). Anthropology of religion. In R. A. Segal & N. P. Roubekas (Eds.), *The Wiley Blackwell companion to the study of religion* (pp. 1–24).

Burgess, J. L. (2021). *How fundraisers solve moral dilemmas: The role of implicit moral identity, moral emotions and moral intuition* [Doctoral dissertation, University of Plymouth].

Burris, C. T. (2002). Morality play or playing morality? Intrinsic religious orientation and socially desirable responding. *Self and Identity, 1*(1), 67–76.

Chowdhury, M. (2018). Emphasizing morals, values, ethics, and character education in science education and science teaching. *MOJES: Malaysian Online Journal of Educational Sciences, 4*(2), 1–16.

Cokrohadisumarto, W. B. M., Ratnawati, A., & Kholis, N. (2024). Measurement of religiosity in Islamic perspective. In *Islamic finance: New trends in law and regulation* (pp. 781–793). Springer Nature Switzerland.

Conroy, S. J., & Emerson, T. L. (2004). Business ethics and religion: Religiosity as a predictor of ethical awareness among students. *Journal of Business Ethics, 50*(1), 383–396. https://doi.org/10.1023/B:BUSI.0000025040.41263.09

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.

Curren, R., & Ryan, R. M. (2020). Moral self-determination: The nature, existence, and formation of moral motivation. *Journal of Moral Education, 49*(3), 295–315.

Furrow, J. L., King, P. E., & White, K. (2004). Religion and positive youth development: Identity, meaning, and prosocial concerns. *Applied Developmental Science, 8*(1), 17–26.

Hart, T. (2020). *Faith thinking: The dynamics of Christian theology*. Wipf and Stock Publishers.

Horowski, J. (2020). Christian religious education and the development of moral virtues: A neo-Thomistic approach. *British Journal of Religious Education, 42*(4), 447–458. https://doi.org/10.1080/01416200.2020.1752618

Jensen, M. A. (2019). Why are women more religious than men? *Inquiries Journal, 11*(10), 23–35.

Kohlberg, L. (1981). *The philosophy of moral development: Moral stages and the idea of justice*. Harper & Row.

Kohlberg, L. (1984). *Essays on moral development: Vol. II. The psychology of moral development: The nature and validity of moral stages*. Harper & Row.

Lamb, G. (2019). Social cohesion and violence in South Africa: Constructing a puzzle with missing pieces. *Crime, Law and Social Change, 72*(4), 365–385.

Lehmann, E. L. (2011). Some concepts of dependence. In *Selected works of E. L. Lehmann* (pp. 815–831). Springer.

Leigh, J. P. (1988). Assessing the importance of an independent variable in multiple regression: Is stepwise unwise? *Journal of Clinical Epidemiology, 41*(7), 669–677.

Lewis, H. D. (2021). Instruments of worship. In *Our experience of God* (pp. 174–188). Routledge.

Malle, B. F. (2021). Moral judgments. *Annual Review of Psychology, 72*, 293–318.

Marek, Z., & Walulik, A. (2021). What morality and religion have in common with health? Pedagogy of religion in the formation of moral competence. *Journal of Religion and Health, 60*(5), 3130–3142.

Licensed Under Creative Commons Attribution (CC BY-NC)

Mathes, E. W. (2021). An evolutionary perspective on Kohlberg's theory of moral development. *Current Psychology, 40*(8), 3908–3921.

McKay, R., & Whitehouse, H. (2015). Religion and morality. *Psychological Bulletin, 141*(2), 44–67.

Mensah, E. (2018). An evaluation of senior high school religious and moral education curriculum: A study in the Brong Ahafo region (Ghana). *Asian Journal of Humanities and Social Studies, 6*(2), 44–51.

Mensah, E., Okyere, P. K., Ampem, I. O., Attipoe, M., Kluboeto, J., Ayerko, E. A., & Kissiwaa, T. (2025). Religious and moral education teachers' use of information and communication technology in teaching at the basic school: A study in Cape Coast, Ghana. *African Quarterly Social Science Review, 2*(1), 82–95. https://doi.org/10.51867/AQSSR.2.1.7

Mikani, M., & Rasoolzadeh Tabatabaei, S. (2021). Religious fundamentalism and quest as predictors of moral foundations among Iranian Muslims. *Journal for the Scientific Study of Religion, 60*(2), 811–829. https://doi.org/10.1111/jssr.12750

Mikolajczyk, A. P., Fortela, D. L. B., Berry, J. C., Chirdon, W. M., Hernandez, R. A., Gang, D. D., & Zappi, M. E. (2024). Evaluating the suitability of linear and nonlinear regression approaches for the Langmuir adsorption model as applied toward biomass-based adsorbents: Testing residuals and assessing model validity. *Langmuir, 40*(39), 20428–20442.

Mulang, H., & Putra, A. H. P. K. (2023). Exploring the implementation of ethical and spiritual values in high school education: A case study in Makassar, Indonesia. *Golden Ratio of Social Science and Education, 3*(1), 01–13.

Nilsson, A., Erlandsson, A., & Västfjäll, D. (2020). Moral foundations theory and the psychology of charitable giving. *European Journal of Personality, 34*(3), 431–447.

Oviedo, L. (2016). Religious attitudes and prosocial behavior: A systematic review of published research. *Religion, Brain & Behavior, 6*(2), 169–184.

Ozhiganova, G. V. (2018). Self-regulation and self-regulatory capacities: Components, levels, models. *RUDN Journal of Psychology and Pedagogics, 15*(3), 255–270.

Park, Y. S., Konge, L., & Artino, A. R., Jr. (2020). The positivism paradigm of research. *Academic Medicine, 95*(5), 690–694.

Pascarella, E., & Terenzini, P. (1991). *How college affects students: Findings and insights from twenty years of research*. Jossey-Bass.

Porco, B. (2003). *Factors affecting the cognitive moral development of undergraduate accounting students: Ethics education, internships, volunteerism, and Beta Alpha Psi* [Doctoral dissertation, Fordham University]. ABI/INFORM Global. (Publication No. AAT 3084893).

Ramezani, A., Liu, E., Ferreira Pinto Junior, R., Lee, S. W., & Xu, Y. (2022). The emergence of moral foundations in child language development. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 44, pp. 26–42).

Rankin, G., & Stokes, M. (1998). Reliability of assessment tools in rehabilitation: An illustration of appropriate statistical analyses. *Clinical Rehabilitation, 12*(3), 187–199.

Regnerus, M. D. (2003). Moral communities and adolescent delinquency: Religious contexts and community social control. *Sociological Quarterly, 44*(4), 523–554.

Sârbu, E. A., Lazăr, F., & Popovici, A. F. (2021). Individual, familial and social environment factors associated with religiosity among urban high school students. *Review of Religious Research, 63*(4), 489–509.

Saroglou, V., Clobert, M., Cohen, A. B., Johnson, K. A., Ladd, K. L., Van Pachterbeke, M., ... Tapia Valladares, J. (2020). Believing, bonding, behaving, and belonging: The cognitive, emotional, moral, and social dimensions of religiousness across cultures. *Journal of Cross-Cultural Psychology, 51*(7–8), 551–575.

Saroglou, V., Pichon, I., Trompette, L., Verschueren, M., & Dernelle, R. (2005). Prosocial behavior and religion: New evidence based on projective measures and peer ratings. *Journal for the Scientific Study of Religion, 44*(2), 323–348. https://doi.org/10.1111/j.1468-5906.2005.00289.x

Scheffé, H. (1999). *The analysis of variance*. John Wiley & Sons.

Skisland, A., Bjørnestad, J. O., & Söderhamn, O. (2012). Construction and testing of the moral development scale for professionals (MDSP). *Nurse Education Today, 32*(3), 255–260.

Skitka, L. J., Bauman, C. W., & Lytle, B. L. (2009). Limits on legitimacy: Moral and religious convictions as constraints on deference to authority. *Journal of Personality and Social Psychology, 97*(4), 567.

Sulaiman, R. B. (2019). *The role of religiosity in ethical decision-making: A study on Islam and the Malaysian workplace* [Doctoral dissertation, Massey University].

Villani, D., Sorgente, A., Iannello, P., & Antonietti, A. (2019). The role of spirituality and religiosity in subjective well-being of individuals with different religious status. *Frontiers in Psychology, 10*, 462–477.

Vitter, J. S. (1985). Random sampling with a reservoir. *ACM Transactions on Mathematical Software, 11*, 37–57.

Licensed Under Creative Commons Attribution (CC BY-NC)

Wahidah, A. F. N. M., & Maemonah, M. (2020). Moral thought of early childhood in perspective Lawrence Kohlberg. *Golden Age: Jurnal Pendidikan Anak Usia Dini, 4*(1), 28–37.

Walker, A. G., Smither, J. W., & DeBode, J. (2012). The effects of religiosity on ethical judgments. *Journal of Business Ethics, 106*(4), 437–452.

Ward, K. (1998). *Religion and human nature*. Oxford University Press.

Ward, S. J., & King, L. A. (2018). Moral self-regulation, moral identity, and religiosity. *Journal of Personality and Social Psychology, 115*(3), 495–505.

Wimalasiri, J., Pavri, F., & Jalil, A. (1996). An empirical study of moral reasoning among managers in Singapore. *Journal of Business Ethics, 15*(12), 1331–1341.

Wolfson, H. A., & Fackenheim, E. L. (1947). Philo: Foundations of religious philosophy in Judaism, Christianity, and Islam. *The Review of Metaphysics, 1*(1), 45–58.

Yaqin, A. (2020, January). Enhancing cognitive developmental approach to moral education in Moslem society. In *Proceedings of the 1st International Conference on Morality (InCoMora)*.

Zmigrod, L., Rentfrow, P. J., Zmigrod, S., & Robbins, T. W. (2019). Cognitive flexibility and religious disbelief. *Psychological Research, 83*(8), 1749–1759.

Licensed Under Creative Commons Attribution (CC BY-NC)